



**Federal Communications Commission  
Office of Engineering and Technology  
Laboratory Division**

April 9, 2018

**GUIDANCE FOR REFERENCING EMC AND RADIO PARAMETER  
TEST DATA IN EQUIPMENT AUTHORIZATION APPLICATIONS**

This publication provides guidance on conditions under which different equipment authorization applications for different devices may reference or reuse EMC and radio parameter test data from the application records of a similar device, for test reduction purposes.<sup>1</sup> As long as all the items in this guidance document are followed by applicants, test laboratories, and TCBs, certification applications based on this guidance are not subject to Pre-Approval Guidance (PAG) procedures (KDB Publication 388624).

1) General guidance

- a) This guidance is limited to RF devices approved under separate FCC IDs that use identical internal printed circuit board layouts, have a common design and components, and where the separate FCC IDs differ only in the population or depopulation of components for the purposes of adding or removing transmitters or frequency bands of operation.<sup>2</sup> Applicable test data for the common operating frequency bands that overlap the separate FCC IDs may be eligible for referencing in a new equipment authorization application.
- b) All compliance tests must be performed on a reference device that is fully populated or contains a majority of the components. The test results for the reference device must include measurement results for all of the required tests under all applicable rule parts and supported air-interfaces (*e.g.*, Wi-Fi, BT, BLE, NFC, and simultaneous transmission testing, further to Sections 2.947(f) and 15.31(k), as applicable). If no single configuration represents a fully-populated reference unit, because of variations in available devices, then the device configuration that has the majority of common components may be used as the reference device.
- c) Applications with references to previous test data shall include spot-check measurement results to demonstrate that the referenced test data remains valid for the new device. Spot-check test data included for the variants shall be based on worst-case results reported in the original FCC ID filing, should remain within the tune-up tolerance range specified for the product, and should be compliant with applicable rule part(s).

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<sup>1</sup> RF exposure and SAR test reduction conditions are provided in KDB Publication 447498 D01 and other KDB publications cited therein. Because SAR is strongly dependent on relative structure and component differences within a device, referencing SAR test data for additional test reduction purposes is generally not available.

<sup>2</sup> If new modes of operation are added to common frequency bands for separate FCC IDs, the new modes of operation must be tested. Likewise, changes to active components such as amplifiers would require re-testing and the common frequency band would not qualify for reference.

- 2) New authorization applications that reference EMC test data from another FCC ID may identify the reference device test report using one of the two following options:
  - a) The test report exhibits for the new device must contain a detailed explanation that clearly identifies the test report exhibit(s) being referenced that are contained in the separate source FCC ID application(s).
  - b) Test report exhibits in a new FCC ID filing must contain suitable explanations when reference test data from a separate source FCC ID is also uploaded into the new FCC ID filing.
- 3) Guidance for explanations submitted for reference EMC test data is as follows. An explanation summary is required in each application for each equipment class under a single FCC ID. This should be an exhibit in the test report folder (exhibit type) of the Form 731 application. In some cases, within a single application, it may be appropriate to have more than one separate reference EMC test data explanation summary or separate summaries filed in the appropriate separate exhibit folder. A recommended outline for the test data summary is as follows.
  - a) *Introduction:* An introductory statement identifying the FCC ID being referenced, and the equipment class(s), rule parts, and frequency bands, if appropriate. A statement is required that the applicant takes full responsibility that the test data as referenced per step d) represents compliance for the new FCC ID.
  - b) *Explain the Differences:* A brief description of the component differences among the different FCC IDs.
  - c) *Spot Check Verification Data Section:* Provide a summary of spot-check test data compared to the reference test data.<sup>3</sup> Spot check test data included for the variants shall be based on worst-case results reported in the original FCC ID filing.
  - d) *Reference Section:* A detailed matrix listing the cross references for cited from other FCC ID(s). The reference section should be organized similarly as listed on the grant (*i.e.*, rule parts, frequency range (MHz), and emission designator). Each listing then would reference the FCC ID, report title, and location (folder or exhibit type) for the referenced test report. At present, details and formats are at applicants' discretion to organize a cross reference matrix that best clarifies each specific situation. In some cases, a simple matrix that cross references to a single common merged report may be sufficient, or separate matrices listing separate references may be appropriate. The reference section needs to clearly allow the reader to understand the scope of each application, what is being granted, and where the test data is located for each listed item.
- 4) Other considerations and requirements
  - a) In general, test report(s) in an application are contained in multiple Form-731 line-entry records associated with equipment classes, initial grants, permissive changes, etc.; as such application records can be complex and confusing, so it is important to keep references simple and organized. Summarize and communicate the organization of the new versus referenced test data, making it clear what the data being referenced is, and what is new test data that is not being referenced.
  - b) For DFS applications seeking to reuse test data, please contact the FCC for guidance (further to KDB Publication 443999).
  - c) Reuse test data can only be cross-referenced within applications under the same Grantee Code. In

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<sup>3</sup> At present the format and amount of spot-check test data is at the discretion of the applicant's engineering judgment, based on their knowledge of the device design, the changes made, and confidence in the observed spot-check test data. For example, include at least spot-check test data for every major rule part and frequency band required to demonstrate compliance.

case of multiple grantees, if a grantee (A) wants to use a separate grantee's (B) test report then:

- i) Grantee (A) must do a change-in-FCC ID (Section 2.933) to the FCC ID of grantee (B) that is referenced. A letter giving permission from grantee (B) to grantee (A) shall be included the change-in-FCC ID application.
- ii) Grantee (A) can may then file a new FCC ID application for the depopulated or otherwise modified device configuration, including reference to the test report in the change-in-FCC ID application.